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(54) **Modified thermostable DNA polymerase**

(57) The invention provides thermostable DNA polymerase enzymes that comprises the amino acid sequence SerGlnIleXaaLeuArgXaa (SEQ ID NO: 1), wherein "Xaa" at position 4 of this sequence is any amino acid residue but not a glutamic acid residue (Glu), preferably a glycine residue and "Xaa" at position 7 of this sequence is a valine residue (Val) or an isoleucine residue (Ile). The thermostable DNA polymerases of the invention have enhanced efficiency for incorporating unconventional nucleotides, such as ribonucleotides, into DNA products and are advantageous in many *in vitro* synthesis applications. Such enzymes are particularly useful for use in nucleic acid sequencing protocols and provide novel means for DNA sequence analysis with cost and efficiency advantages. Also claimed are nucleic acids encoding said polymerases, vectors and host cells comprising such a nucleic acid, as well as compositions for use in a DNA sequencing reaction, kits and methods for sequencing including such polymerases.

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EUROPEAN SEARCH REPORT

Application Number
EP 97 11 3182

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<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>& : member of the same patent family, corresponding document</p>			

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